

SCANNING SYSTEM WITH CALIBRATED DETECTION AND METHOD

ABSTRACT OF THE INVENTION

A self-calibrating scanning system and method are used in the analysis of
5 biomolecules on a microarray. The self-calibrating scanning system comprises an
excitation light source, an optical portion, a detection portion and a calibration portion
that includes a calibration apparatus and compensation portion. The calibration
apparatus comprises a light source having a highly reproducible or calibrated light
based on a preselected or reference light level. The calibration apparatus emits the
10 calibrated light that is measured by the detection portion of the scanning equipment.
If the detection components are stable, the components will measure a constant output
value for the calibrated light over time. As a detection component changes with time,
the output value will change for the same calibrated light. The method comprises the
steps of initially calibrating the detection portion of the scanning system and
15 subsequently calibrating the detection portion to compensate for sensitivity changes.